

DATE

TRANSMITTAL SLIP

14 April 1971

TO:

25X1

ROOM NO.

BUILDING

REMARKS:

C/ASB TR
Thurs - Good

memo -

Vincent
R-6
[Signature]

14 APR 1971

FROM:

25X1

ROOM NO.

BUILDING

EXTENSION

FORM NO. 241

REPLACES FORM 36-8
WHICH MAY BE USED.

(47)

SECRET

NPIC/TSG/RED/ATB-057/71

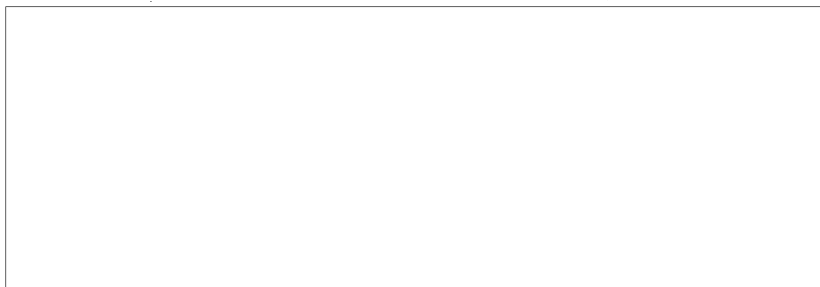
1 April 1971

MEMORANDUM FOR: Chief, Human Factors Section, ATB/RED/TSG

SUBJECT : Evaluation of Solicited Competitive Proposals Entitled, "Subjective Color Image Quality Assessment Study"

1. The APSD and RED have a requirement for an image evaluation system capable of assessing quality of operational color imagery, in a manner that reflects or predicts P.I. judgements/performance. The present color image quality work is concerned with the many important objective parameters of color film requiring intensive study. However, no quality assessment system within NPIC is possible without considering the human response, an aspect of the problem that has been neglected to date and requires prompt attention. Initially, a system is desired that, (1) defines techniques for subjective ranking of color image quality by photoscienceists, (2) provides examples of operational color imagery of varying quality as a visual reference for comparison and analysis, and (3) is sufficiently quantitative to dovetail with the objective measures under development so that their interrelationships may be determined.

2. In December 1970 an RFP with Development Objectives treating this problem was sent to the firms listed below; their response is indicated. The D.O. encouraged maximum flexibility and creativity on the part of the bidder recognizing the new and unique nature of the objectives set forth.



3. Each proposal was evaluated on its technical merit by nine individuals assigned among RED, APSD and IEG. No specific rating procedures were stipulated. The requirement

SECRET

GROUP 1
Excluded from automatic
downgrading and
declassification

25X1

~~SECRET~~

SUBJECT: Evaluation of Solicited Competitive Proposals Entitled, "Subjective Color Image Quality Assessment Study"

was merely to evaluate each proposal with respect to the D.O. and rank them in order of preference. The evaluation results are summarized below:

a. [] was ranked first by 7 out of 9 evaluators.

25X1

b. The two evaluators that did not select [] first selected different firms as best (different from [] and each other); the two non [] firms selected first were in the lower half of the overall rankings.

25X1

225X1

4. The D.O. did not specify any costs limits or man power levels; therefore, total dollar comparisons are not directly indicative of cost efficiency. When the comparison includes total dollars and engineering man hours/month, the breakout is as follows:

25X1

5. In general those firms offering more than 400-eng. man hrs/mo have little or no experience with psychophysical studies directly. The people involved in the PE proposal are

~~SECRET~~

~~SECRET~~

SUBJECT: Evaluation of Solicited Competitive Proposals Entitled "Subjective Color Image Quality Assessment Study"

in this category. Similarly, the [] group has limited experience itself and intends to sub contract the psychophysical portion of their proposal [] Those firms with less than 400 engineering man hrs/mo. are better acquainted with NPIC, and have experience in psychophysical testing. Consequently they will require corresponding less time to get up to speed, leaving more hours for the project itself. In this category Boeing offers 100 engineering man hours per month more than their nearest competitor.

25X1

25X1

6. On a basis of technical ability and understanding of the problem, [] has little real competition. This may not seem surprising at first glance since they have been working at NPIC for several years. However, they are not alone in this category; []

25X1

[] have been associated with NPIC longer, though not at the same dollar level nor on the same type of project. What is significant is that none of the bidders has worked at NPIC on subjective color image evaluation problems.

25X1

25X1

[] has done this kind of work for the Dept. of the Army, Behavioral Sciences Research Laboratory (BESRL); however, they do not get good marks from BESRL for their work.

25X1

7. [] has a sound operationally oriented approach with useful deliverable items in addition to the final report. Their technique allow estimates of the acquisition system as well as the reproduction cycle quality to be judged. The only real alternative bids proposed to work primarily with models and simulated imagery. [] experience with black and white subjective image evaluation provides a fine point of departure. Their participation in the current objective Optical Power Spectrum (OPS) program would allow them to study the correlation between subjective and objective measures. Boeing is the only company to propose this extension of the subjective work as part of the current proposal.

25X1

25X1

8. While the idea of new blood was considered at length, it was concluded to be a disadvantage in this case, where the utility of results is directly dependent on the unique NPIC systems and operations. As a whole, the color

~~SECRET~~

~~SECRET~~

SUBJECT: Evaluation of Solicited Competitive Proposals Entitled "Subjective Color Image Quality Assessment Study"

image evaluation concepts proposed [redacted] were not new, innovative, experimentally efficient, or well conceived; this was true to a greater degree for those with less experience.

25X1

9. Overall the [redacted] will give NPIC the most for its money, at the lowest risk. It is therefore recommended that the contract to perform the "Subjective Color Image Quality Study" be awarded to the [redacted]

25X1

25X1

[redacted]
NPIC/TSG/RED/ATB/ITL

25X1

Distribution:

Original - Addressee
1 - NPIC/TSG/RED/ATB

NPIC/TSG/RED/ATB [redacted] (2 April 1971)

25X1

~~SECRET~~